

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20544

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of

Amendment of the Commission's Rules to
Establish Part 27, the Wireless Communication
Service ("WCS")

GN Docket No. 96-228

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COMMENTS OF PACS PROVIDERS FORUM

PACS Providers Forum ("PPF") hereby responds to the Commission's Notice of Proposed Rulemaking issued in the above-captioned proceeding ("Notice"). PPF supports the Commission's proposed creation of a new Wireless Communications Service ("WCS") in the 2305-2320 and 2345-2360 MHz bands, and offers comment on selected issues below.

I. BACKGROUND

PPF is an industry group established in 1995 to promote the development of Personal Access Communications Systems ("PACS"), a low-power, low-cost radio system capable of providing extremely high quality voice and data transmission for both fixed and mobile uses. PPF is a Washington, D.C. non-profit corporation, presently comprised of ten member corporations,¹ each a leader in the development of PACS as an operating standard.²

PACS itself is a low-tier, low-power system standardized for operation in the 1850-1990 MHz band licensed by the Commission for broadband Personal Communications Services ("PCS"). One of the distinguishing features of PACS is its small and inexpensive radio

¹ PPF's members are: Bellcore; Brooktree Corporation; GCI Communications, Inc.; Hughes Network Systems; Lucent Technologies; Matsushita Communication Industrial Corporation of America/Panasonic; Motorola; National Paging and Personal Communications Association; NEC America, Inc; Newbridge Networks; Pacific Communications Sciences, Inc. ("PCSI"); and Siemens Stromberg-Carlson. These comments are submitted solely on behalf of PPF, and do not necessarily reflect the position of any individual member.

² PPF is not a standards-setting body, but has been organized to provide a forum for members to discuss developmental and technical issues.

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ports, or “cells,” which make it an ideal technology for offering high-quality voice and data services in high tele-traffic areas, utilizing as little as 10 MHz of spectrum. PACS is fully compatible with the local exchange network and is interoperable with existing cellular systems.

Because PACS is an emerging technology, its potential uses have not yet been fully defined, but it is certain that new PCS providers will be able to use PACS for fixed or mobile services, deployed either as stand-alone systems or as complements to high-tier, high-power Commercial Mobile Radio Service (“CMRS”) systems. With its small cells, PACS is particularly well-suited for fixed service uses, such as “wireless local loop,” in-building wireless PBX (“private branch exchange”) and wireless centrex services. Given the Commission’s recent order providing CMRS providers with maximum flexibility to use their spectrum to offer fixed and hybrid fixed/mobile services in addition to pure mobile service,³ PACS will facilitate the rapid deployment of PCS competitors to wireline local loop providers, providing economic and feature-rich services without sacrificing quality, reliability or security.

II. THE COMMISSION SHOULD ALLOCATE WCS SPECTRUM IN A MANNER THAT ACCOMMODATES THE OPERATIONS OF A VARIETY OF WCS PROVIDERS, INCLUDING TERRESTRIAL FIXED AND MOBILE WIRELESS SERVICES

In the Omnibus Consolidated Appropriations Act of 1997,⁴ Congress required the Commission to reallocate the frequencies at 2305-2320 and 2345-2360 MHz for wireless services that are consistent with international agreements concerning spectrum allocations, and to assign the use of this spectrum via competitive bidding procedures.⁵ In response to Congress’s action, the Commission has decided to take the innovative step of creating a new service, WCS, that would permit spectrum obtained by a potential WCS licensee to be used flexibly, depending on the nature and business vision of the individual provider. The Commission’s proposal would

³ See Amendment of the Commission’s Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services, *First Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 96-6 (released August 1, 1996).

⁴ See Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996) (“Appropriations Act”).

⁵ See Notice at ¶ 2.

permit a potentially broad range of fixed, mobile, radiolocation and broadcasting satellite services to make use of WCS spectrum.

PPF supports the Commission's implementation of policies that promote spectrum flexibility and market-based determinations as to the best "mix" of WCS services desired by the public. PPF believes that key components of this service mix will include low-cost wireless local loop services and innovative complements to emerging PCS systems. PPF therefore urges the Commission to ensure that the spectrum allocated to WCS will support the commercial development of such terrestrial fixed offerings. To that end, PPF makes the following recommendations.

A. **10 MHz Allocations.**

The *Notice* requests comment on the appropriate amount of spectrum to be provided for each WCS license, and specifically seeks comment on the "what size spectrum block could best support, in part or fully, the provision of fixed local loop services."⁶

PPF urges the Commission to create spectrum blocks that include at least 10 MHz of bandwidth. The Commission previously has recognized 10 MHz as the minimum viable allocation for innovative broadband PCS offerings,⁷ and the same is true of technologies necessary for the deployment of wireless local loop services. PACS, for example, is the most probable technology choice for wireless local loop providers,⁸ and requires at least 10 MHz for operation.

To the extent that wireless local loop services have been characterized as a core example of the Commission's "spectrum policy paradigm" to promote competition among different wireless services even as it promotes competition between wireless and other technologies,⁹ it would be fundamentally inconsistent to exclude potential wireless local loop

⁶ *Id.* at ¶ 11 (footnote omitted).

⁷ See Amendment of the Commission's Rules to Provide New Personal Communications Services, *Second Report and Order*, 8 FCC Rcd 7700, 7725, ¶¶ 57-58; *Memorandum Opinion and Order*, 9 FCC Rcd 4957, 4981-82, ¶¶ 60-61.

⁸ PACS has been adopted as the ANSI standard for the provision of wireless local loop services. See ANSI-JSTD-014-1996.

⁹ See Remarks of Michelle C. Farquar, Chief, Wireless Telecommunications Bureau, "Spectrum Policies that Promote Competition: the U.S. Model" (November 20, 1996).

service providers from participation in WCS -- another example of the same paradigm in action. Allocating spectrum in at least 10 MHz blocks will ensure that terrestrial providers, including smaller “niche” players in the wireless marketplace, can gain access to viable WCS spectrum allocations in the event that the auction determines that theirs is the spectrum’s highest valued use. Correspondingly, 10 MHz allocations will also guarantee that other potential WCS service uses and technologies, including satellite-based services, are not disadvantaged by insufficient allocations if they are successful in acquiring WCS spectrum at auction.¹⁰

B. Paired Frequencies.

The *Notice* also queries whether WCS spectrum should be assigned to licensees on a paired or unpaired basis.¹¹

PPF strongly urges the Commission to adopt a paired frequency block structure for WCS spectrum, separated by 40 MHz. This is the approach that the Commission followed with respect to the broadband PCS allocation,¹² and is a critical requirement for any technology that uses a frequency division duplex (“FDD”) method of providing two-way communications -- including PACS and most cellular and PCS systems. Indeed, given the proximity of the WCS bands to those frequency bands allocated for broadband PCS, the public interest simply would not be served by the *de facto* exclusion of an extremely large and diverse class of providers that is well-positioned to maximize the innovative development and rapid deployment of WCS spectrum.

In addition, the use of paired frequency bands generally will increase the range, reduce the cost and improve the outdoor service quality of terrestrial WCS systems. This is

¹⁰ See *Notice* at ¶11. Allocating WCS spectrum in at least 10 MHz blocks, as opposed to allocations of smaller size, will also reduce the number of licenses awarded, and, to that extent, will speed the WCS licensing process in manner that is consistent with congressional mandates in the Appropriations Act. See *id.* at ¶13.

¹¹ *Id.* at ¶12.

¹² See Amendment of the Commission’s Rules to Provide New Personal Communications Services, *Second Report and Order*, 8 FCC Rcd at 7725, ¶ 56 & n.52. See also *Notice of Proposed Rulemaking*, 7 FCC Rcd 5676, 5692, ¶38 (noting that licensees of paired frequencies would retain flexibility to channelize frequency blocks to accommodate the services they wish to provide, and that a paired frequency plan, while allowing for channel pairings, would also allow for operation of single frequency technologies providing one-way or two-way time division duplex service).

because less sophisticated interference-avoidance techniques are needed when higher power, fixed radio ports use a common frequency block that is separated from the frequencies used by lower power, mobile subscriber units.

C. **No Buildout Requirements.**

Finally, with respect to service rules, PPF agrees, given the broad range of services that may be offered using WCS spectrum and the Commission's proposed use of competitive bidding to allocate licenses, that performance requirements in the form of construction benchmarks are not needed to address congressional and Commission concerns regarding spectrum warehousing and speed of service deployment.¹³ The *Notice* acknowledges that strict buildout requirements can lead in some cases to uneconomic construction or service rollouts that are not properly attuned to competitive marketplace developments.¹⁴ And in any event, the use of auctions will ensure that WCS spectrum ends up in the hands of the parties that value it most, and that have the most incentive to develop it. Under such circumstances, PPF submits that buildout requirements are unnecessary and potentially harmful impediments to the most efficient construction of WCS systems.

III. **CONCLUSION**

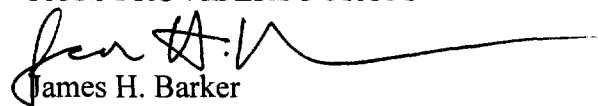
PPF respectfully requests that the Commission allocate spectrum to new Wireless Communications Service in accordance with the recommendations outlined above.

Dated: December 4, 1996

Respectfully submitted,

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¹³ See *Notice* at ¶¶ 58-60.

¹⁴ See *id.* at ¶ 59.